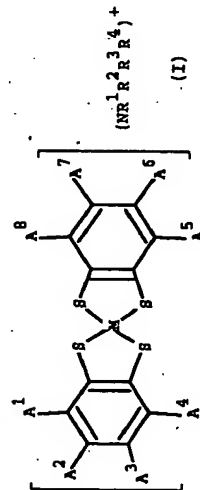


95-213179/28 A97 E12 G02 MITK 93.09.10  
 MITSUBISHI TOATSU CHEM INC  
 93.09.10 93JP-226000 (95.05.16) C09D 11/00, 11/02, 11/10  
 UV cure type security ink compsn. - contg. acrylate-type UV cure  
 type resin compsn. and dithiol cpd., for printing information cards  
 C95-098599  
 Addnl. Data: 94.09.01 94JP-208604

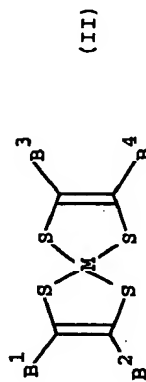
A UV cure type security ink compsn. (P) contg. acrylate type UV cure  
 resin compsn. (A) and at least one kind of dithiol of formula (I) or  
 formula (II);



A<sup>1</sup>-A<sup>8</sup> = independently hydrogen atom, halogen atom, nitro gp. cyano  
 gp. thiocyanate gp. cyanate gp. acyl gp. carbamoyl gp.  
 alkylaminocarbonyl gp. alkoxycarbonyl gp. aryloxycarbonyl gp. or  
 opt. substd. alkyl gp. opt. substd. aryl gp. opt. substd. alkoxy gp. opt.

A(4-F1A, 8-C4, 11-C2B, 12-D, 12-W7D) E(5-L, 5-M,  
 5-N) G(2-A4A)

substd. aryloxy gp. opt. substd. alkylthio gp. opt. substd. arylthio gp.  
 opt. substd. alkylamino gp. or opt. substd. arylamino gp. Adjacent two  
 substituents may have bonded each other through a linking gp.  
 R<sup>1</sup>-R<sup>4</sup> = independently opt. substd. alkyl gp. opt. substd. aryl gp.  
 M = divalent metal atom, trivalent or tetravalent substd. metal atom, or  
 oxymetal.



B<sup>1</sup>-B<sup>4</sup> = independently hydrogen atom, cyano gp. acyl gp. carbamoyl  
 gp. alkylaminocarbonyl gp. alkoxycarbonyl gp. aryloxycarbonyl gp.  
 opt. substd. alkyl gp. or opt. substd. aryl gp. Adjacent two substituents  
 may have bonded each other through a linking gp.  
 M = divalent metal atom, trivalent or tetravalent substd. metal atom,  
 or oxymetal.

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USE

(P) is suitably applied for printing various information cards such as credit cards, prepaid cards, bank notes, valuable securities which can be detected with 700-1,800nm near IR and mfg. near IR ray cut filters and heat ray absorption filters.

ADVANTAGE

(P) has excellent storage stability. Recordings printed with (P) can be correctly read with near infrared ray and resistant to light.

PREFERRED COMPOSITION

(1) (A) is acrylate type monomer(s), oligomer(s), or their mixts. which cure by irradiation of 190-480nm UV light. (2) (A) is acrylate type monomer(s) oligomer(s), or their mixt. which cure by irradiation of 190-480nm light and contain photoinitiator (C) and opt. UV absorber (D) or singlet oxygen quencher (E).

EMBODIMENT

(C) may be selected from the gp. of conventional photoinitiators. Examples of (D) are benzotriazol type UV absorbers, benzophenone type UV absorbers, cyanoacrylate type UV absorbers, and salicylate type UV absorbers, Examples of (E) organic Ni type quenchers such as Seesorb 612NH and Irgastab 2002. A suitable (A)/(B)/(C) wt. ratio

is 1/0.01-50/0.0001-10.0). (CM)  
(8pp180DwgNo.0/0)

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